

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NUMBER PERMIT NUMBER 42059**

I. INTRODUCTION

This Class II Air Quality Control Permit is for the operation of portable Heater-Planer units used for repaving that will be operated statewide in Arizona. This is a renewal for Air Quality Permit Number 1000774.

A. Company Information

Facility Name: Cutler Repaving – Heater / Planer Unit
Mailing Address: 921 East 27th Street
Lawrence, Kansas 66046-4917
Facility Address: Portable Unit, Currently, out of state (Denver, CO)

B. Attainment Classification

This source is a portable repaving unit and is permitted to operate throughout the state.

II. FACILITY DESCRIPTION

A. Process Description

Three preheating machines and one remixing machine raise the temperature of the pavement to 250-275 F. The remixing machine then scarifies the softened pavement to the specified depth (usually 1.5-2") and gathers it to a center window. Then a small amount of new hot mix and/or asphalt rejuvenating agent is added. The new hot mix and/or rejuvenating agent are blended in a pugmill mixing unit. The blended material is spread and compacted.

B. Air Pollution Controls:

There are no control systems installed on these units. The units have a heater with an attached generator. Asphalt added to the pavement is premixed and stored in the unit for use.

Parameters of Interest:

3 Preheaters and Repaver with internal combustion engines:

Fuel used:	Liquid Petroleum Gas (LPG) - Propane
Maximum Capacity:	11.5 MMBtu/hr for each preheater and repaver
HP Rating of engines:	475 hp, 475 hp, 225 hp, 225 hp
Fuel used:	Diesel

Hours of operation (State-wide):	8760 hrs/yr
Hours of operation (Maricopa County):	14 hrs/day and 4711 hrs/yr

The internal combustion engines for the preheaters and repaver are considered as non-road engines as the engines are on preheaters and repavers and are intended to be propelled while performing their functions. Below is a list of engines on the preheaters and repavers.

EQUIPMENT TYPE	FUNCTION	MAX. CAPACITY	FUEL TYPE	MAKE	MODEL	EQUIPMENT ID NUMBER	SERIAL NUMBER	DATE OF MFG.
Preheater - Engine	Unit Power/Propulsion	200HP	Diesel	Detroit Diesel	6--71	158	06FA002461	2002
Preheater - Engine	Unit Power/Propulsion	200HP	Diesel	Detroit Diesel	6--71	2001	RB1603-7000DDR	2006
Preheater - Engine	Unit Power/Propulsion	200HP	Diesel	Detroit Diesel	6--71	2002	06FA002772	2004
Preheater - Engine	Unit Power/Propulsion	200HP	Diesel	Detroit Diesel	6--71	2003	06FA2191	2001
Preheater - Engine	Unit Power/Propulsion	200HP	Diesel	Detroit Diesel	6--71	2007	6FA2586	2003
Preheater - Engine	Unit Power/Propulsion	225HP	Diesel	International	Series 40	2014	1471696	2005
Preheater - Engine	Unit Power/Propulsion	225HP	Diesel	International	Series 40	2017	1346121	2001
Preheater - Engine	Unit Power/Propulsion	475HP	Diesel	Detroit Diesel	Series 60	2101	06R0766245	2004
Preheater - Engine	Unit Power/Propulsion	225HP	Diesel	Detroit Diesel	Series 40	2250	1331228	2001
Repaver - Engine	Unit Power/Propulsion	300HP	Diesel	Detroit Diesel	8V-92T	1111	8FF4307	2002
Repaver - Engine	Unit Power/Propulsion	250HP	Diesel	Detroit Diesel	8V-92	1144	8FF3645	2001
Repaver - Engine	Unit Power/Propulsion	250HP	Diesel	Detroit Diesel	8V-92	1155	8FF3891	2003
Repaver - Engine	Unit Power/Propulsion	300HP	Diesel	Detroit Diesel	8V-92T	1177	8FF4132	2001
Repaver - Engine	Unit Power/Propulsion	300HP	Diesel	Detroit Diesel	8V-92T	2512	8FF6399	2006
Repaver - Engine	Unit Power/Propulsion	300HP	Diesel	Detroit Diesel	8V-92T	2513	8FF5205	2003
Repaver - Engine	Unit Power/Propulsion	300HP	Diesel	Detroit Diesel	8V-92T	2514	8FF4824	2002
Repaver - Engine	Unit Power/Propulsion	475HP	Diesel	Detroit Diesel	Series 60	2515	06R0766214	2004
Repaver - Engine	Unit Power/Propulsion	300HP	Diesel	Detroit Diesel	8V-92T	2533	8FF4690	2002
Repaver - Engine	Unit Power/Propulsion	300HP	Diesel	Detroit Diesel	8V-92T	2566	8FF4175	2003

III. COMPLIANCE HISTORY

Compliance history for the Cutler Repaving, Inc. (Place ID: 15684): There are two air quality cases associated with this facility which were initiated in 2002 and 2004 respectively. The facility and/or file have been inspected or reviewed two times with one inspection and one report review resulting in the below described violations.

The first case associated with this facility is Case Number 22794. A Notice of Correction was issued to Cutler Repaving on June 10, 2002, based on a May 15, 2002, inspection. The nature and description of the violation was not available. The case was closed on July 17, 2002. No additional information was available regarding this violation.

The second case associated with this facility is Case Number 28541. A Notice of Violation was issued to Cutler Repaving on April 21, 2004, for one statutory violation based on the January 1, 2004, inspection (Inspection ID: 44631). The facility was cited for non-compliance with **A.R.S. § 49-426(A)(2) / A.A.C. R18-2-302(A)-Failure to obtain a permit or permit revision from ADEQ prior to operating a source subject to regulation**. The factual description of the violation indicates that the portable equipment transfer notice dated January 19, 2004, lists equipment that was not covered by Permit Number 25251. Compliance was achieved on May 7, 2004, and the case was closed on June 15, 2004.

No other air quality cases and/or violations appear to be associated with this facility at this time. The facility is in-compliance and there are currently no outstanding air quality enforcement issues.

IV. LIMITATIONS ON POTENTIAL TO EMIT

This facility does not have the potential to emit (operating for 8760 hours per year) more than 100 tons per year of criteria pollutants when operating throughout State of Arizona except for Maricopa County. While operating in Maricopa County, the facility has a potential to emit more than the BACT limits and is therefore restricted to operate for 14 hrs/day and 4711 hrs/yr.

V. EMISSIONS

The facility is classified as a Minor Source pursuant to Arizona Administration Code (A.A.C.) R18-2-101.61. Table #1 quantifies the total emissions from the entire facility when operating at 8760 hrs/yr.

Table 1: Facility-Wide Emissions

Pollutant	Emissions	
	(lb/hr)	(tpy)
PM	0.30	1.32
PM ₁₀	0.30	1.32
SO ₂	0.75	3.30
NO _x	9.55	41.84
CO	1.61	7.05
VOCs	0.25	1.10

VI. APPLICABLE REGULATIONS

Table 2 identifies the applicable regulations corresponding to every process unit and also provides verification as to why that standard applies.

Table 2: Verification of Applicable Regulations

Unit	Date of Manufacture	Control Device	Rule	Verification
Heater-Planer Unit	Post 1968	None	A.A.C. R18-2-801.B A.A.C. R18-2-803	This article applies to the sources that move while emitting pollutants but are not classified as motor vehicles.
Fugitive Dust	N/A	Water and other reasonable precautions	A.A.C. Article 6, A.A.C. R18-2-702	These are applicable to any fugitive dust source.
Operation in Pima County	N/A	N/A	Pima County Code 17.16	These regulations are applicable to all the portable facilities operating in Pima County.
Operation in Pinal County	N/A	N/A	Pinal County Code (PCC) Article 7, PCC §§3-1-082, PCC §§4-2-040, 050	These regulations are applicable to all the portable facilities operating in Pinal County.
Operation in Maricopa County	N/A	N/A	Maricopa County Code, Regulation III, Rule 340, Rule 241, Rule 300, Rule 320,	These regulations are applicable to all the portable facilities operating in Maricopa County.

VII. PREVIOUS PERMITS

Previous Permits

The following table lists the previous permits that have been issued to Cutler Repaving, Inc., for the operation of the Heater-Planer unit.

Table 3: Previous Permits

Date of Permit Issuance	Permit Number	Application Basis
August 3, 2001	1000774	Operating Permit
June 11, 2004	33017	Facility Change Without Revision

VIII. PREVIOUS PERMIT CONDITIONS

This operating permit was issued to Cutler Repaving, Inc. on August 3, 2001, for the operation of three preheaters, one repaver and a generator.

Table 4: Permit # 1000774

Condition No.	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Att. A.	x				General Provisions - Revised to represent most recent permitting language.
Att. B. I				x	Heater-Planer Requirements
Att. B. II			x		The internal combustion engines on the preheaters and repavers were determined to be non-road engines and have been deleted from the renewal draft permit.
Att. B. III	x				Fugitive Dust requirements - Revised to represent most recent permitting language.
Att. B. IV		x			Conditions Specific to Portable Sources - Revised to represent most recent permitting language.
Att. C				x	Equipment List
Att. D				x	Conditions for Operation inside Pima County - Revised to represent most recent permitting language.
Att. E				x	Conditions for Operation inside Pinal County - Revised to represent most recent permitting language.
Att. F				x	Conditions for Operation inside Maricopa County - Revised to represent most recent permitting language.

IX. LEARNING SITES POLICY

In accordance with ADEQ's Environmental Permits and Approvals Near Learning Sites Policy, the Department conducted an evaluation to determine if any nearby learning sites would be adversely impacted by the Cutler Repaving facility. Learning sites consist of all existing public schools, charter schools and private schools at the K-12 level, and all planned sites for schools approved by the Arizona School Facilities

Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ.

The Department was unable to identify learning sites within two miles of the facility as currently the preheaters and repavers are located out of state. Also, this is a portable facility and the initial location in state was not identified by the Permittee. Due to the above reasons, ADEQ was unable to determine if the operation of the facility will adversely affect the learning sites.

X. MONITORING AND RECORD KEEPING REQUIREMENTS

A. Heater-Planer Units

1. Monitoring Requirements

The permit requires quarterly opacity test in addition to monthly surveys of visual emissions from the heater-planer unit to be performed by a certified EPA Reference Method 9 observer. If the opacity of the emissions observed appears to exceed the standard, the observer is required to conduct a certified EPA Reference Method 9 observation.

2. Recordkeeping Requirements

- a. The Permittee is required to record and maintain a log of the daily hours of operation and calculate a rolling twelve-month total of hours of operation of the heater-planer units at the end of each month while operating in Maricopa County.
- b. The Permittee is required to record the emission point being observed, date, time and the results of all visible emission surveys or Method 9 observations made, as well as the name of the observer who conducted the test. In the event of opacity going beyond the limit, the Permittee will keep a record of the corrective action taken to bring the opacity below the standard.
- c. The Permittee is required to keep records of the type of fuel burned for each piece of equipment.
- d. The Permittee is required to keep records of the serial numbers / equipment id numbers of each preheater and repaver in operation at a particular location.

B. Fugitive Dust

1. Monitoring Requirements

Opacity

The permit requires monthly visual surveys or EPA Reference Method 9 observations of fugitive emissions by a certified Method 9 observer.

2. Recordkeeping Requirements

The Permittee is required to record the emission point being observed, date, time and the results of all observations made, as well as the name of the observer who conducted the test. In the event of opacity going beyond the limit, the Permittee will keep a record of the corrective action taken to bring the opacity below the standard.

XI. LIST OF ABBREVIATIONS

A.A.C.....	Arizona Administrative Code
ADEQ.....	Arizona Department of Environmental Quality
AQD.....	Air Quality Division
CO.....	Carbon Monoxide
HAP.....	Hazardous Air Pollutant
hp.....	Horsepower
hr.....	Hour
lb.....	Pound
MMBtu.....	Million British Thermal Units
NO _x	Nitrogen Oxide
PM.....	Particulate Matter
PM ₁₀	Particulate Matter Nominally less than 10 Micrometers
PTE.....	Potential-to-Emit
SO ₂	Sulfur Dioxide
TPY.....	Tons per Year
VOC.....	Volatile Organic Compound
yr.....	Year